DH2323 VT20 Course Analysis
Computer Graphics and Interaction 6,0hp
61 students received credits, 16 LEQ respondents

DH2323 focusses on intermediate level computer graphics and interaction programming using C++ and libraries and game technologies, such as OpenGL and the Unity game engine.
Students must pass labs (P/F: 3,0hp) and their final grade is then determined through their performance on a project (A-F, 3,0hp).

Summary of course changes
All lectures and labs were moved online (Zoom) at very short notice.

Overview

Aspect	Feedback and action
I really enjoyed the course and the independence we had when working on the projects. The freedom in the project and the flexibility with all assignments.	Thanks for all your great feedback supporting the approach taken in the course!
The adaptation to the distance situation. The online lectures were great! I haven't attended this many lectures since my first year at KTH. Good work proving that lectures at distance are possible.	It is very good to hear that the online lectures worked well this year, even if it was all rather last minute. We will continue to assemble online materials and consider how the course will run next year should lectures continue to need to be given online only.
I liked that the course had soft deadline, which made at least me less stressed about the labs and the project.	It is good to hear that the approach to deadlines is useful for students. While the vast majority of students submit very close to the deadline, for a variety of reasons, usually relating to level of workload in other courses, sometimes submission delays are unavoidable.
Fix all issues in the lab assignments. A lot of students have already pointed out the errors on canvas, so they are not hard to find.	The lab set-up is a continuing issue in this course due to the huge variation in the computer systems used by students. We provide source code in a lot of different formats, but unfortunately it is not possible to make sure that it works “out-of-the-box” on all systems. For this reason, we will consider solutions such as creating a track that will run on the Unity game engine.
Be more clear about the scope of the project	Due to the nature of the project, which is similar in many ways to Master thesis work, we recommend that you plan and specify your project and seek feedback. This is the purpose of the project specification phase in the project, but it requires your active participation. However, looking at the many examples of previous projects shown through their blogs also gives a good idea of scope, in addition to the 3 credits allocated to the project.

Make the lectures more interactive with the students	We will definitely consider this when we redesign the course for next year in order to better take the pandemic and online learning into account.
A lot of challenge disappeared from having taken DH2320 before this one	While DH2320 is a recommend course, nevertheless in student questionnaires, it remains the case that less than half the class have taken it and so the course still caters to those with minimal graphics programming experience. Those who have taken DH2320 are advised to go as deep as possible into the project, since the labs are really only intended to be scaffolding for preparing the students for the project.

Details

Covid restrictions were introduced the week before the first physical DH2323 lecture was due to take place, necessitating a short notice move to online lectures given via Zoom. Lab sessions were also moved online to Zoom. Despite this move, course feedback was generally still good. Varying between 5.9/7.0 (19: learning in different ways) and 6.9/7.0 (1: interesting issues). While it was expected that a lack of interaction in the class with student would reduce the experience, quite a few comments highlighted how good the online lectures were and how well they worked.

In relation to formative feedback, comments highlighted the important role of constant iterative feedback, for example, on the project specifications. It should be noted that in order to benefit from this approach, students must be active participants in it and a lack of participation in the this process usually leads to a lack of clarity about the scope of the project (although many previous projects are available to examine, we still strongly recommend participating in the project specification activities).
Lab assignments were mentioned this year in relation to the difficult of making them work. While these issues only seem to affect a minority of students in the course and usually relate to MacOS, they can be especially disruptive for beginners to programming or just those that are just unlucky. Beyond the basic source code, it is difficult for us to provide projects that are guaranteed to work on all operating systems and IDEs. We do expect that students in the course will be familiar with the process of building the code on their systems. However, next year, to alleviate these issues we intend to introduce a lab track that makes use of the Unity game engine which will bypass the build process as much as possible and work on all IDEs.

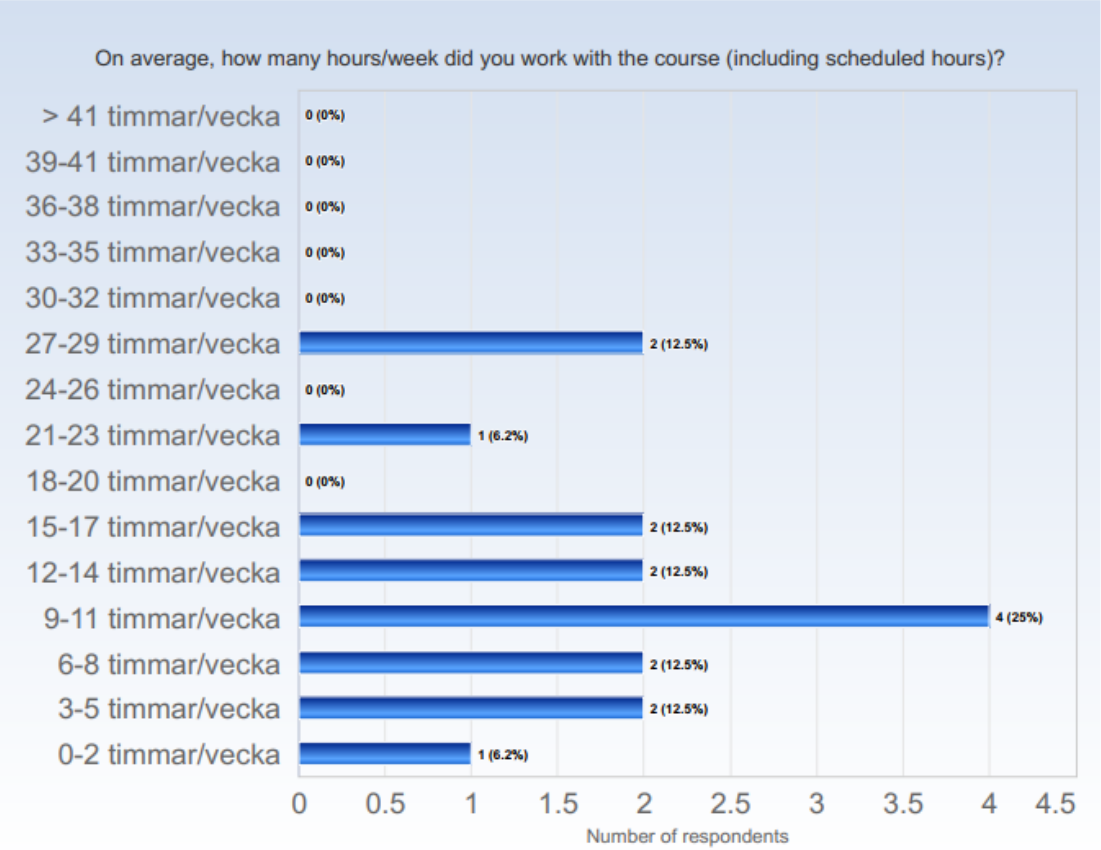
Overall, despite the changes needed to the course at short notice due to the start of the pandemic, this course iteration went unexpectedly well.

LEQ Course evaluation data follows:

DH2323 - 2020-06-16

Antal respondenter: 84
Antal svar: 16
Svarsfrekvens: 19,05 %

ESTIMATED WORKLOAD

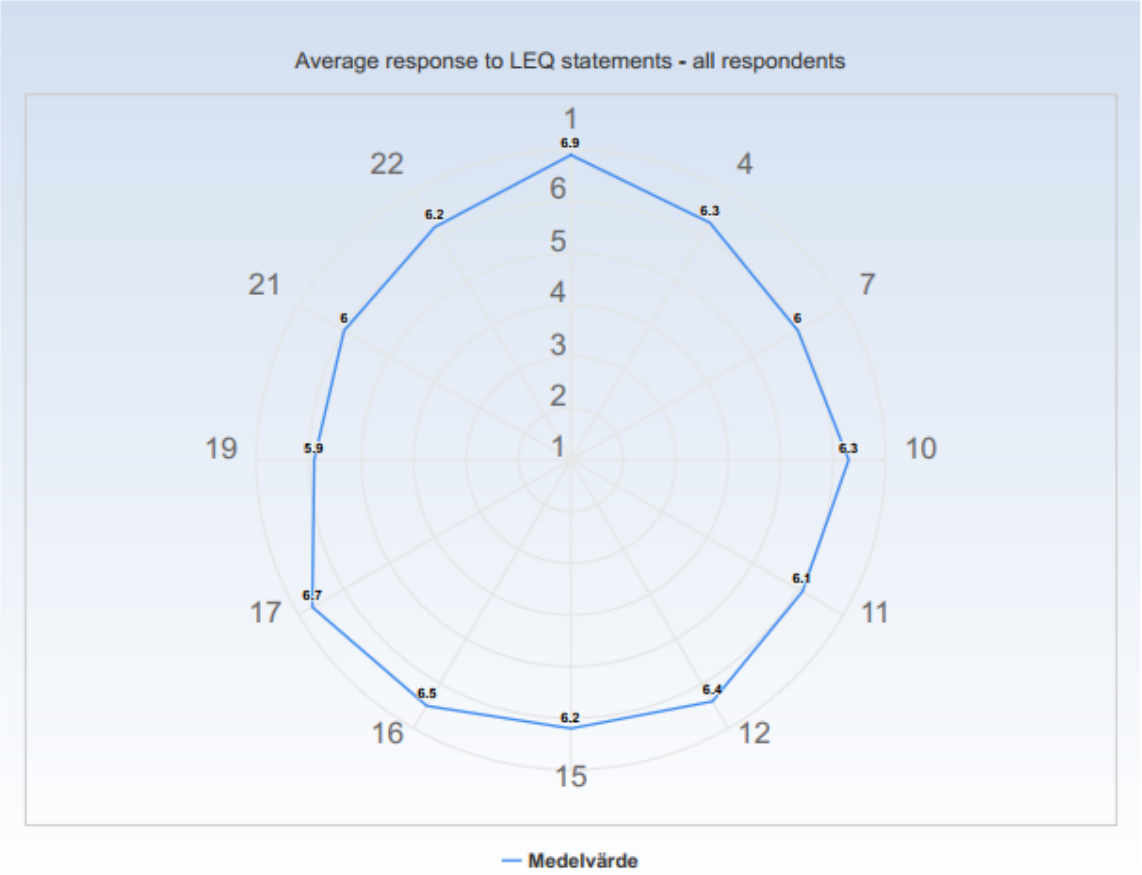


LEARNING EXPERIENCE

The polar diagrams below show the average response to the LEQ statements for different groups of respondents (only valid responses are included). The scale that is used in the diagrams is defined by:

1 = No, I strongly disagree with the statement
4 = I am neutral to the statement
7 = Yes, I strongly agree with the statement

Note! A group has to include at least 3 respondents in order to appear in a diagram.



KTH Learning Experience Questionnaire v3.1.4

Meaningfulness - emotional level

Stimulating tasks

1. I worked with interesting issues (a)

Exploration and own experience

2. I explored parts of the subject on my own (a)
3. I was able to learn by trying out my own ideas (b)

Challenge

4. The course was challenging in a stimulating way (c)

Belonging

5. I felt togetherness with others on the course (d)
6. The atmosphere on the course was open and inclusive (d)

Comprehensibility - cognitive level

Clear goals and organization

7. The intended learning outcomes helped me to understand what I was expected to achieve (e)
8. The course was organized in a way that supported my learning (e)

Understanding of subject matter

9. I understood what the teachers were talking about (f)
10. I was able to learn from concrete examples that I could relate to (g)
11. Understanding of key concepts had high priority (h)

Constructive alignment

12. The course activities helped me to achieve the intended learning outcomes efficiently (i)
13. I understood what I was expected to learn in order to obtain a certain grade (i)

Feedback and security

14. I received regular feedback that helped me to see my progress (j)
15. I could practice and receive feedback without being graded (j)
16. The assessment on the course was fair and honest (k)

Manageability - instrumental level

Sufficient background knowledge

17. My background knowledge was sufficient to follow the course (f)

Time to reflect

18. I regularly spent time to reflect on what I learned (l)

Variation and participation

19. The course activities enabled me to learn in different ways (m)
20. I had opportunities to influence the course activities (m)

Collaboration

21. I was able to learn by collaborating and discussing with others (n)

Support

22. I was able to get support if I needed it (c)

Learning factors from the literature that LEQ intends to examine

We tend to learn most effectively (in ways that make a sustained, substantial, and positive influence on the way we think, reflect, act or feel) when:

a) We are trying to answer questions, solve problems or acquire skills that we find interesting, exciting or important

b) We are able to speculate, test ideas (intellectually or practically) and learn from experience, even before we know much about the subject

c) We are able to do so in a challenging and at the same time supportive environment

d) We feel that we are part of a community and believe that other people have confidence in our ability to learn

e) We understand the meaning of the intended learning outcomes, how the environment is organized, and what is expected of us

f) We have adequate prior knowledge to deal with the current learning situation

g) We are able to learn inductively by moving from concrete examples and experiences to general principles, rather than the reverse

h) We are challenged to develop a true understanding of key concepts and gradually create a coherent whole from the content

i) We believe that the work we are expected to do will help us to achieve the intended learning outcomes

j) We are able to try, fail, and receive feedback before, and separate from, each summative assessment of our efforts

k) We believe that our work will be considered in an honest and fair way

l) We have sufficient time for learning and devote the time needed to do so

m) We believe that we have control over our own learning, and not that we are being manipulated

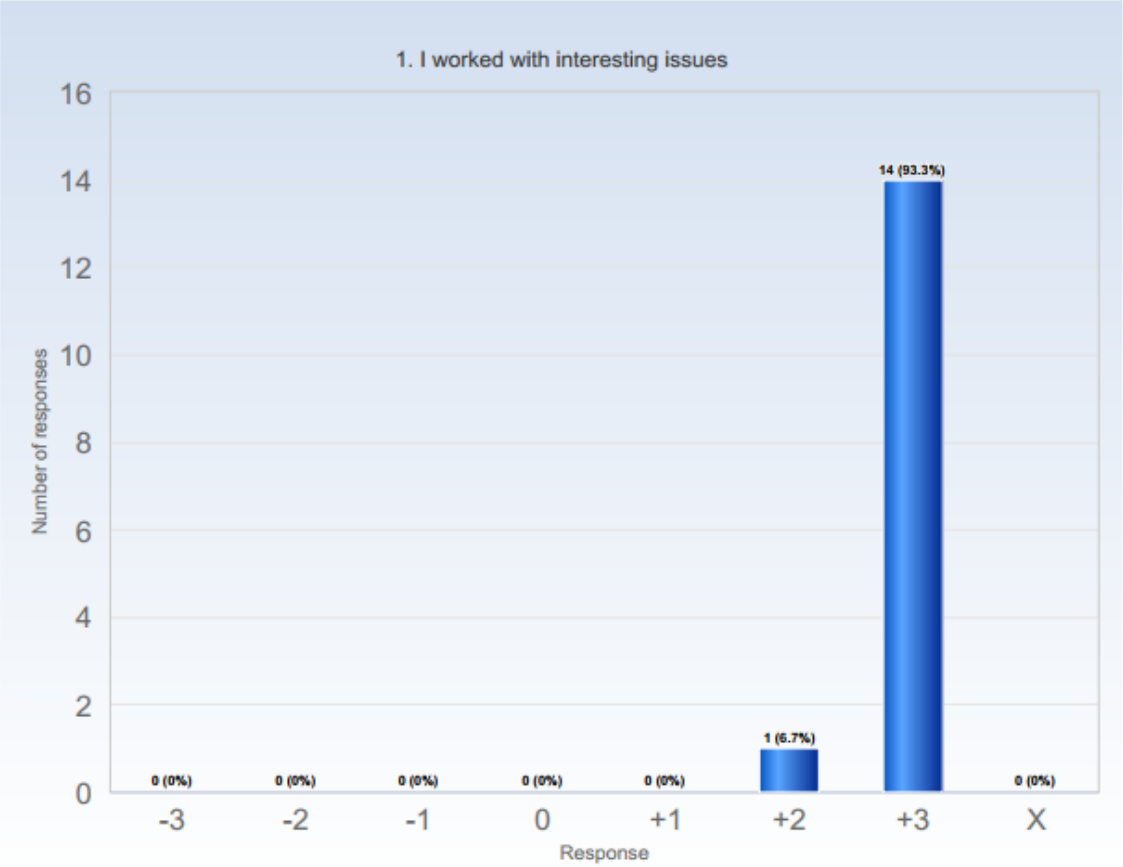
n) We are able to collaborate with other learners struggling with the same problems

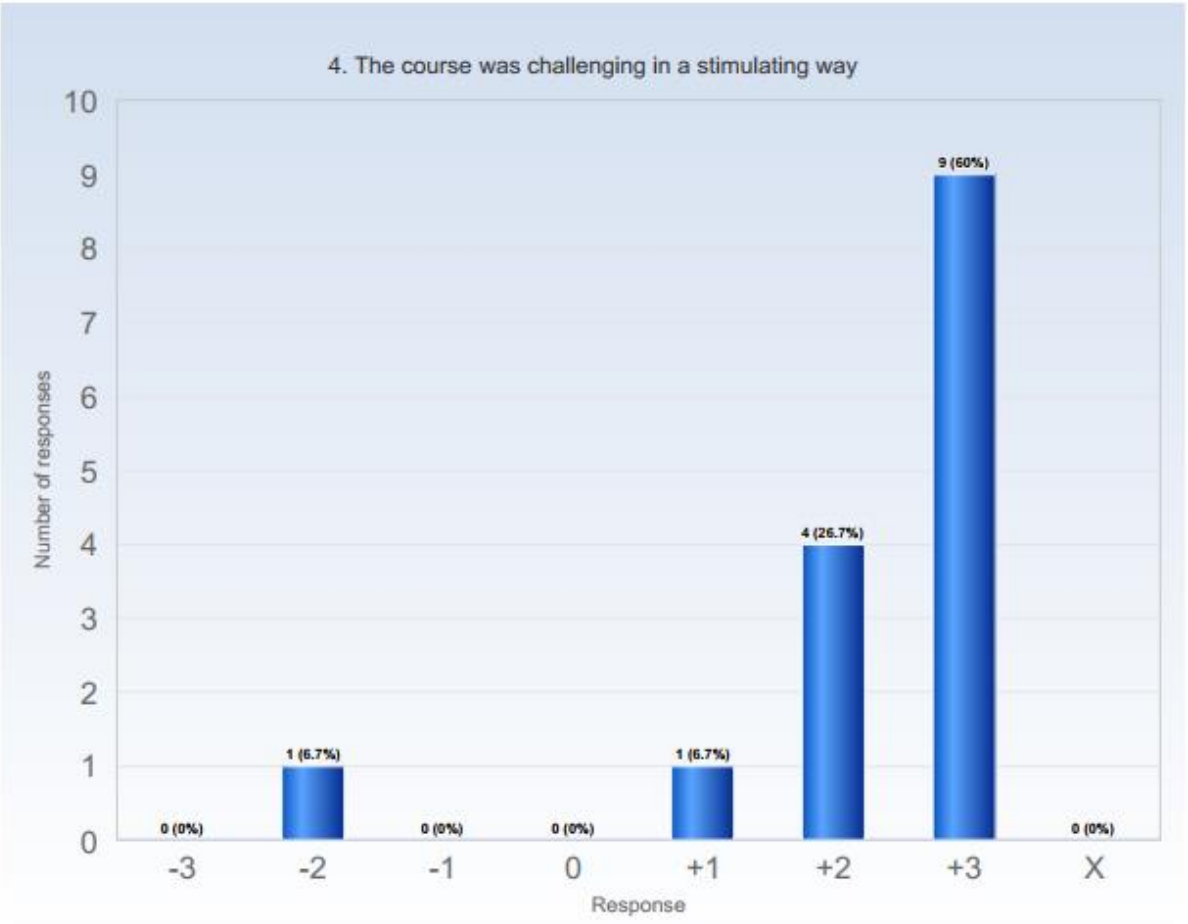
RESPONSE DATA

The diagrams below show the detailed response to the LEQ statements. The response scale is defined by:

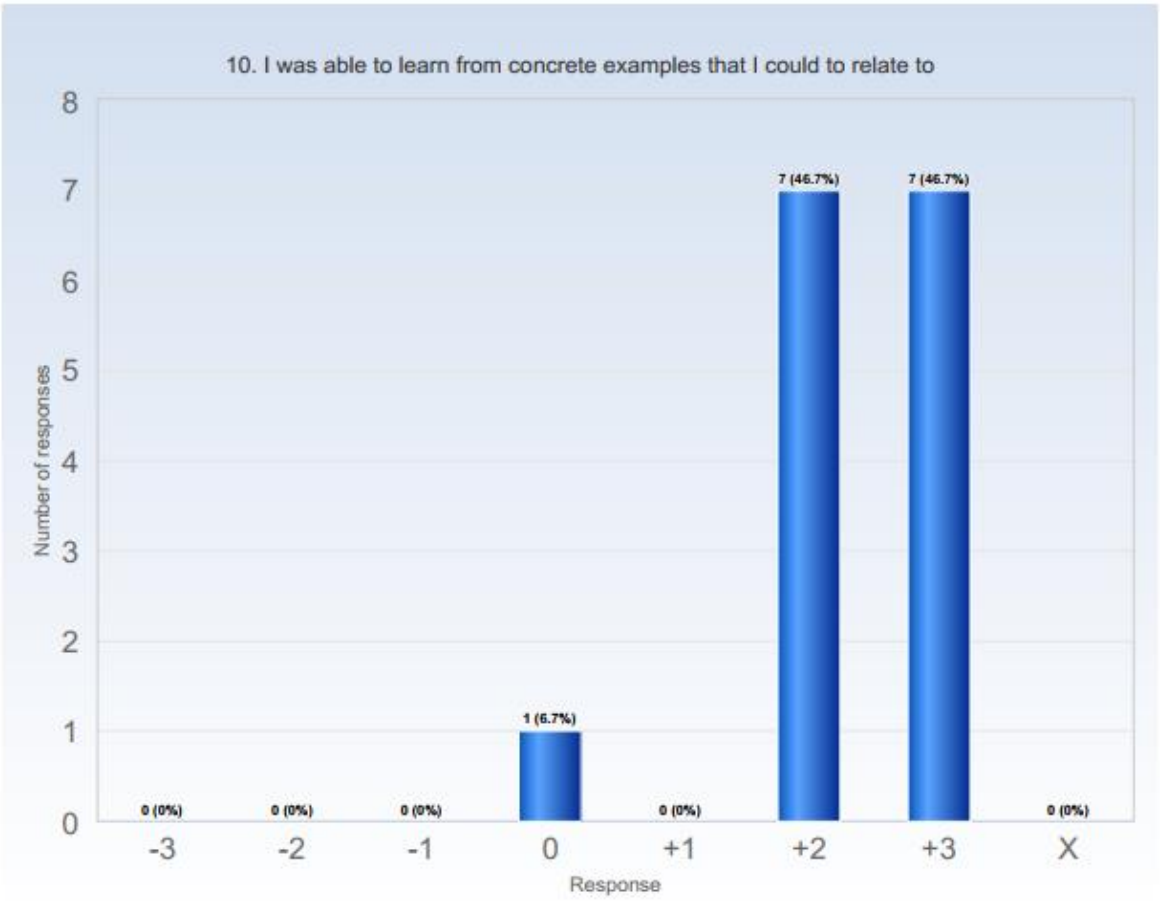
-3 = No, I strongly disagree with the statement
0 = I am neutral to the statement
+3 = Yes, I strongly agree with the statement

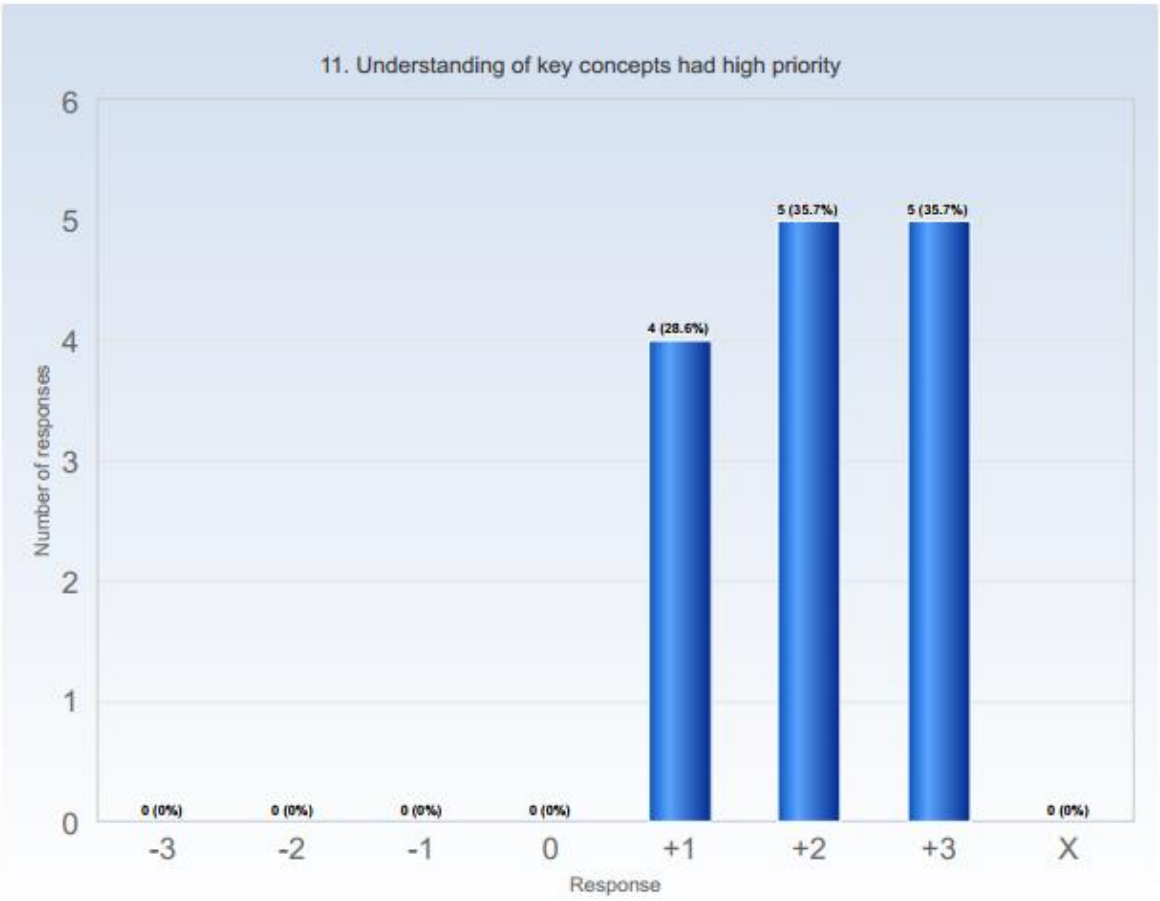
X = I decline to take a position on the statement

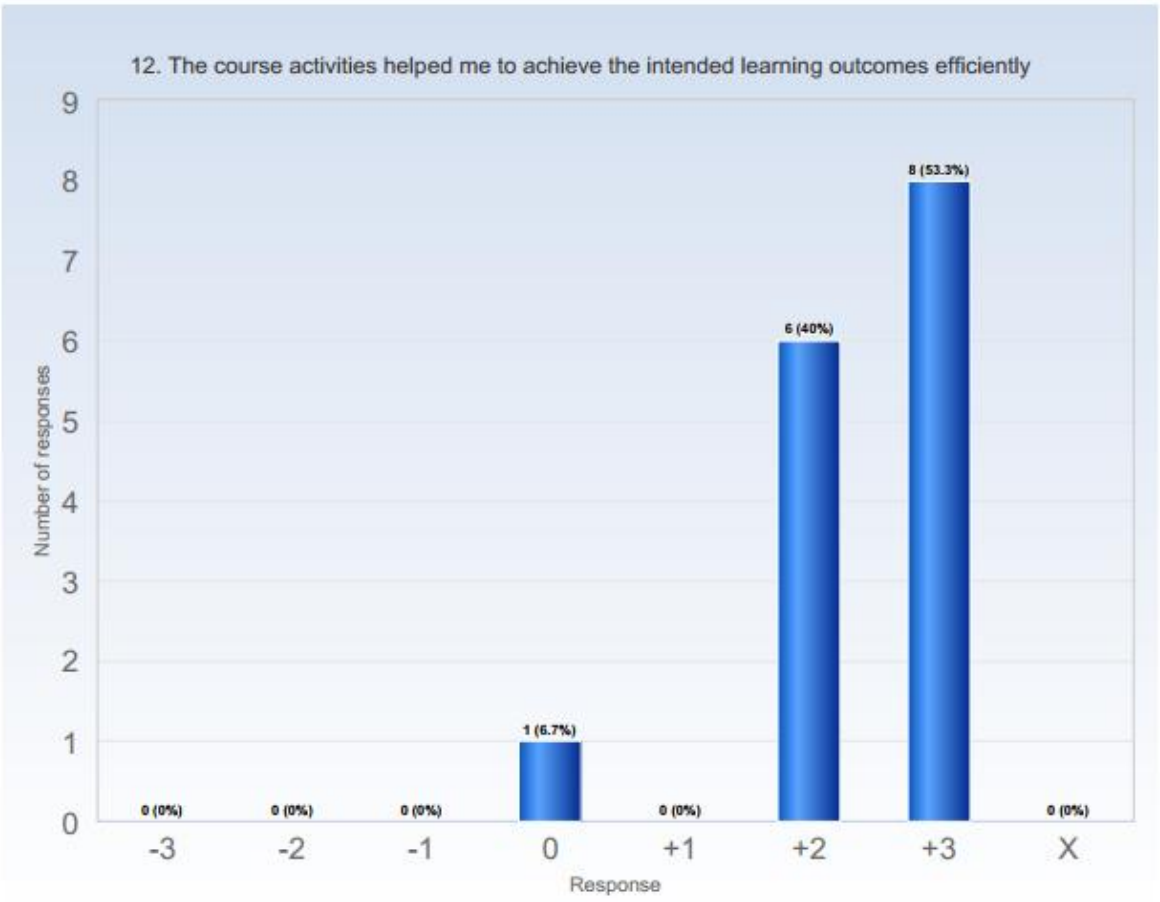


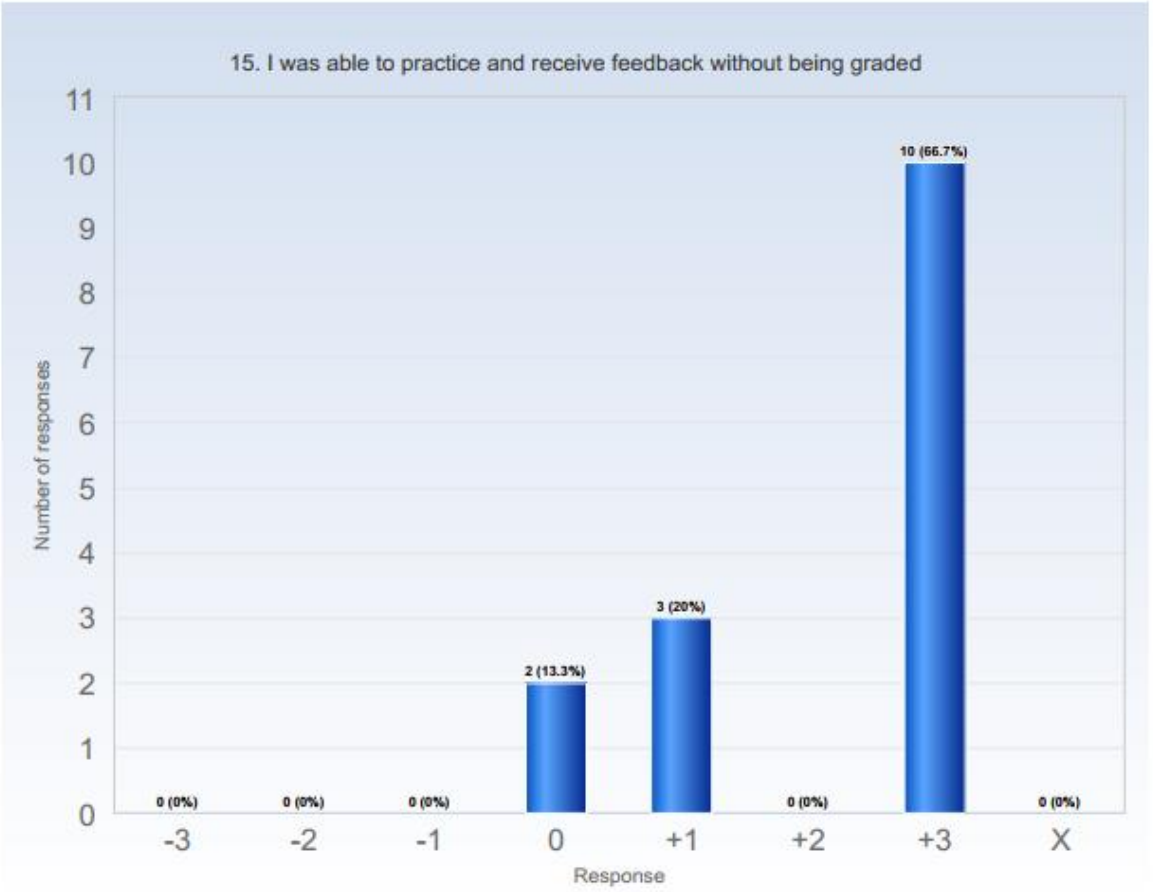

4. The course was challenging in a stimulating way
Number of responses
10
9
8
7
6
5
4
3
2
1
0
0 (0%)
1 (6.7%)
0 (0%)
0 (0%)
1 (6.7%)
4 (26.7%)
9 (60%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

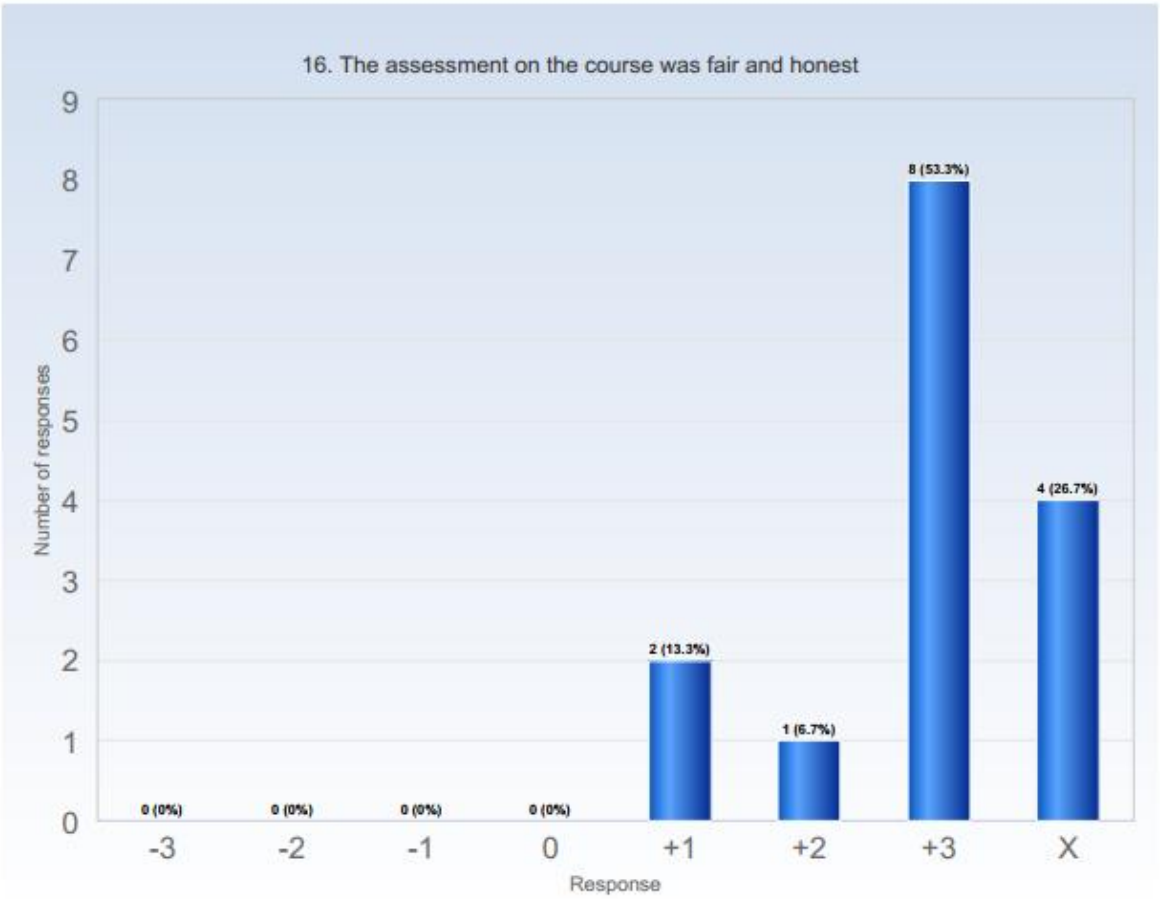

7. The intended learning outcomes helped me to understand what I was expected to achieve
Number of responses
Response
0 (0%)
0 (0%)
1 (6.7%)
0 (0%)
2 (13.3%)
7 (46.7%)
5 (33.3%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X

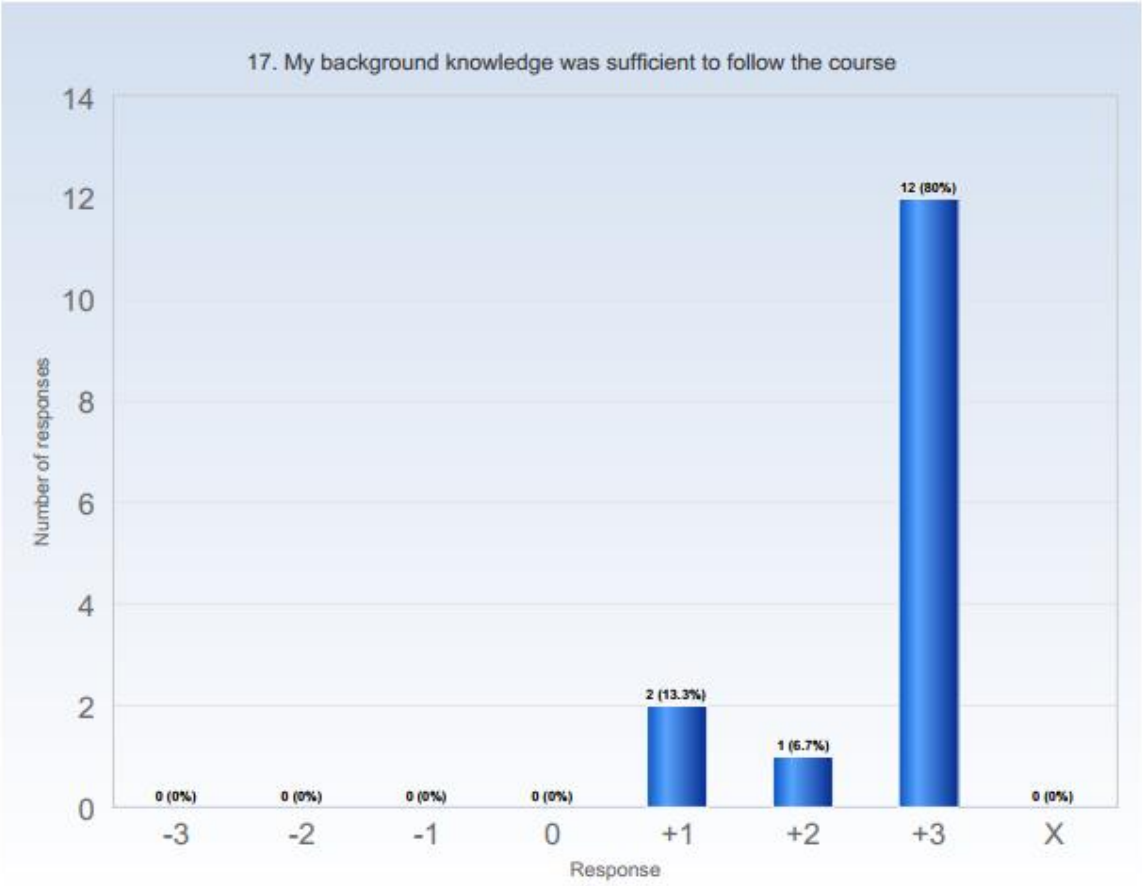

10. I was able to learn from concrete examples that I could to relate to
Number of responses
8
7
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
1 (6.7%)
0 (0%)
7 (46.7%)
7 (46.7%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

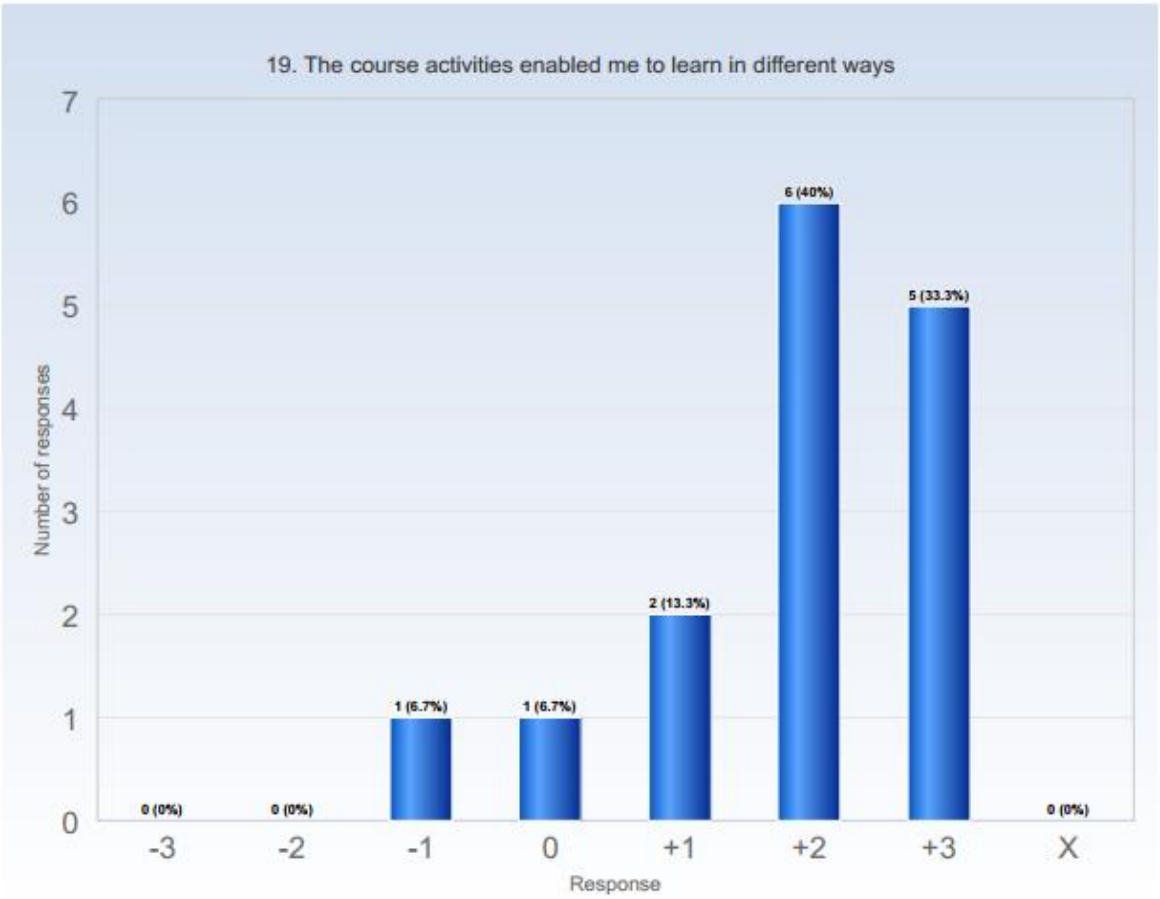

11. Understanding of key concepts had high priority
Number of responses
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
0 (0%)
4 (28.6%)
5 (35.7%)
5 (35.7%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

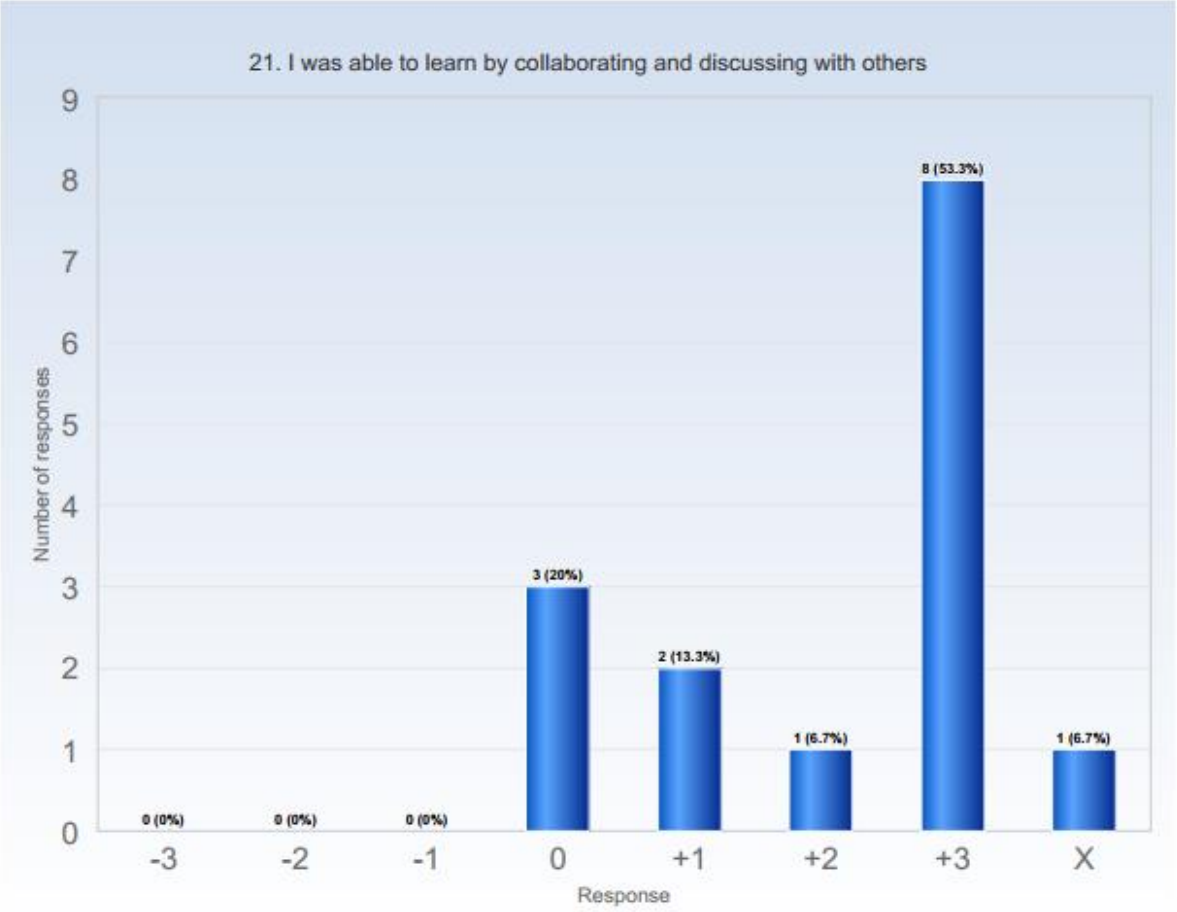

12. The course activities helped me to achieve the intended learning outcomes efficiently
Number of responses
9
8
7
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
1 (6.7%)
0 (0%)
6 (40%)
8 (53.3%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response

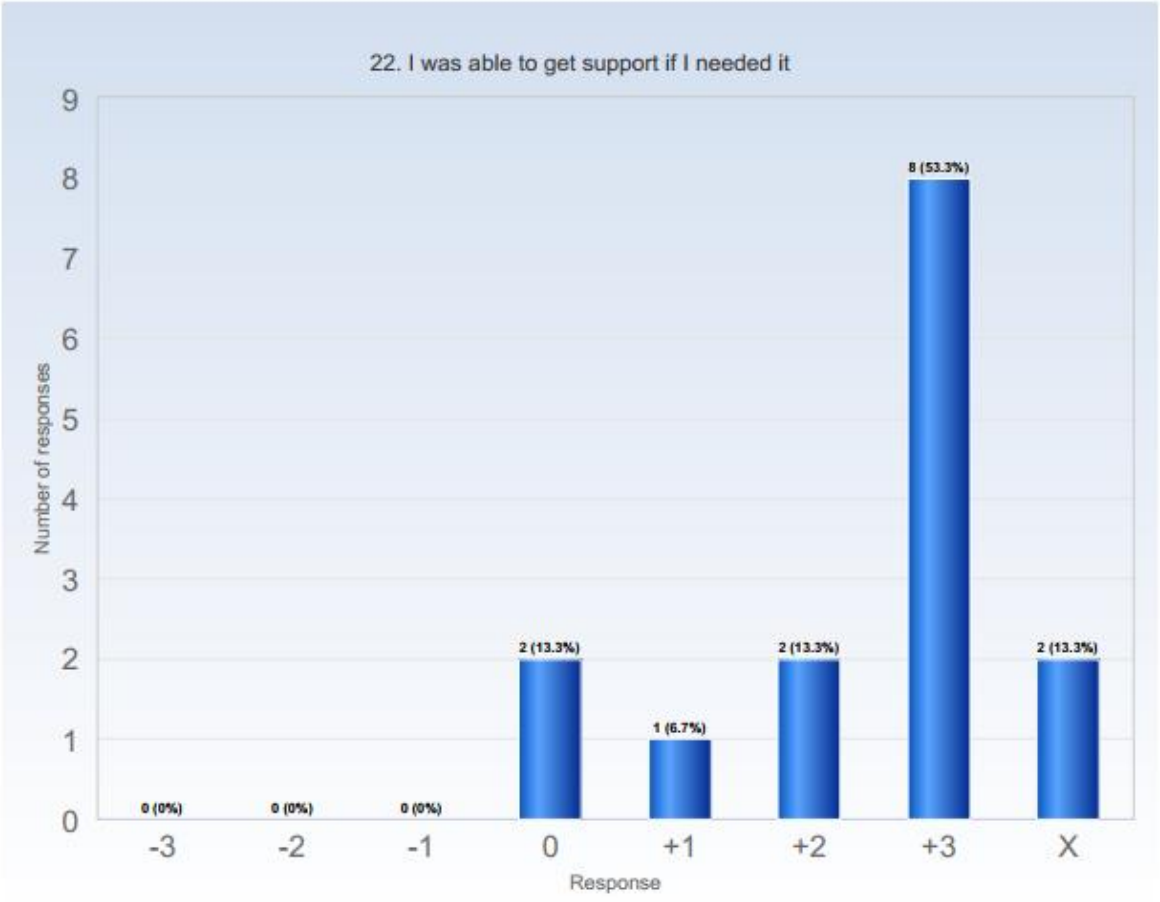

15. I was able to practice and receive feedback without being graded
Number of responses
11
10
9
8
7
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
2 (13.3%)
3 (20%)
0 (0%)
10 (66.7%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response


16. The assessment on the course was fair and honest
Number of responses
9
8
7
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
0 (0%)
2 (13.3%)
1 (6.7%)
8 (53.3%)
4 (26.7%)
-3
-2
-1
0
+1
+2
+3
X
Response


17. My background knowledge was sufficient to follow the course
Number of responses
14
12
10
8
6
4
2
0
0 (0%)
0 (0%)
0 (0%)
0 (0%)
2 (13.3%)
1 (6.7%)
12 (80%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response


19. The course activities enabled me to learn in different ways
Number of responses
0
1
2
3
4
5
6
7
0 (0%)
0 (0%)
1 (6.7%)
1 (6.7%)
2 (13.3%)
6 (40%)
5 (33.3%)
0 (0%)
-3
-2
-1
0
+1
+2
+3
X
Response


21. I was able to learn by collaborating and discussing with others
Number of responses
Response
0 (0%)
0 (0%)
0 (0%)
3 (20%)
2 (13.3%)
1 (6.7%)
8 (53.3%)
1 (6.7%)
-3
-2
-1
0
+1
+2
+3
X


22. I was able to get support if I needed it
Number of responses
9
8
7
6
5
4
3
2
1
0
0 (0%)
0 (0%)
0 (0%)
2 (13.3%)
1 (6.7%)
2 (13.3%)
8 (53.3%)
2 (13.3%)
-3
-2
-1
0
+1
+2
+3
X
Response